Chemicals to be studied	Applications	Biomonitoring	Health Effects	Audio-vestibular Findings in Animals / Humans
Toluene	Glues, Paints: Many industrial Processes	Hippuric Acid in Urine	Cognitive and neurological dysfunction, dizziness, Hearing loss	Altered auditory brainstem responses, relative risk to hearing x5 for toluene and x11 for toluene and noise in workers
Xylene	Paints, degreasers, solvents for resins, gum and rubber Medical and Industrial applications	Methylhippuric acid in urine	Decreased peripheral nerve function, CNS symptoms	Reduced auditory sensitivity
Styrene	Plastics, Latex paints and coatings, polyesters, synthetic rubber. Wide use in Packaging industry	Mandelic acid and PGA in urine or styrene by gas chromotography	Changes in cerebral activities, dizziness, hearing loss, hepatotoxic	Cortical responses affected; vestibular disturbances; slight hearing changes reported; % outside upper limit of hearing were 12% for noise and 33% for noise and styrene
TCE	Metal degreaser, Manufacture of adhesives, paints, pesticides, paint strippers, varnishes, cleaning fluids	Trichloroacetic acid and trichloroethynol in urine	Headache, loss of memory, neural conduction deficits, hepatotoxic, hearing loss	Mid-high frequency hearing loss and ABR abnormalities; Vestibular system also affected
Carbon disulfide	Pesticide, Fumigant, Manufacture of viscose-rayon, vulcanisation of rubber	2-thiothiazolidine-4-carboxylic acid (TTCA) in urine	Extensive neurological deficits, imbalance and hearing loss	Delayed ABR, High frequency hearing loss, synergistic action with noise
Solvent Mixtures	Common in many industrial applications	Test for main component in urine	Neurotoxicity	Impaired Interrupted speech discrimination, cortical response abnormalities
Solvent and Noise	Industrial plants with noisy machinery and solvent use	Test for solvent in urine and noise exposure	Hearing loss and specific solvent effects	Synergistic effect on hearing in shipyard workers, paper mills, printers, rayon manufacturers